

ABSTRACT

To provide a method of forming a planar lipid-bilayer membrane for membrane protein analysis, by which downsizing, simplifying, and multichanneling of a device therefor are achieved. A planar lipid-bilayer membrane 24 is formed by filling a microchannel 12 with a buffer solution 18, the microchannel 12 disposed under a horizontal partition wall 13 having an aperture 14; applying a small amount of a lipid solution 20 as a droplet on the aperture 14 filled with the buffer solution 18 to thereby form a thin layer 21 of the lipid solution in a chamber, the chamber 17 being formed at a position corresponding to the aperture 14 and provided with a liquid trap 15 inside the chamber; and applying a buffer solution 23 as a droplet to the chamber 17 from the upper side of the chamber.